How to Configurate Icommand in Windows Platform.

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Introduction

I have decided to write this document, because, I had severals problems when I started to program with Icommand and I saw in NXT forums a lot of people with my same problems then I started to write it. I hope that it help you.

This document try to explain with my comments and photos the documentation attached with http://sourceforge.net/project/showfiles.php?group_id=178176 , ***icommand 0.5***

Icommand is a package allows you to control your NXT using Java and a Bluetooth connection. It uses the standard Lego NXT firmware to receive commands from Java code on your computer. We are still looking for users to test this on Linux and Macintosh systems and provide install documentation. Please email me (bbagnall@mts.net) or leave comments at www.lejos.org/forum if you can test this and type up some docs for those respective platforms.

Installation

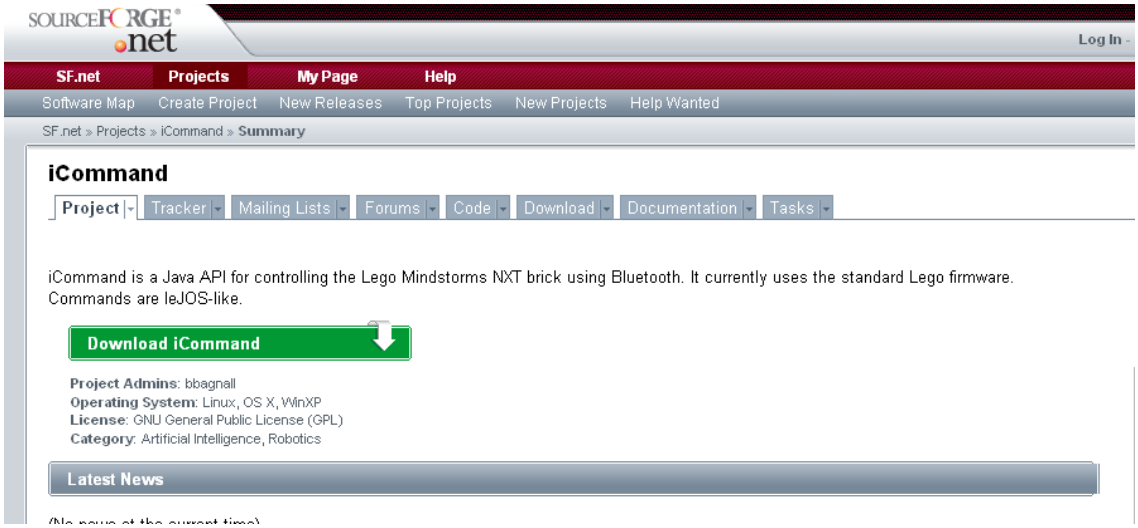
Installation is a little steep because of all those pesky JAR files (and DLL's) that need to be set up in Java. There are several things to set up to get iCommand working: Java SDK (you probably already have it if you program in Java), Eclipse (optional IDE but recommended), RXTX (a package that allows communication), setting up a Bluetooth COM port, and iCommand (this). Note: This package was tested using J2SDK 1.4.2_12 and 1.5.0_06 on Windows.

iCommand Install

1. Unzip the contents of iCommand_0.5.zip into a directory.
2. Set your classpath to include icommand.jar. In Eclipse, after you start a new project, select Project, Properties, Java Build Path and "Add External Jars...", then browse to icommand.jar.

Comments:
Download icommand from Icommand website, http://sourceforge.net/projects/nxtcommand/ (When I wrote this document, latest version of icommand was icommand0.5) http://sourceforge.net/project/showfiles.php?group_id=178176 or in http://lejos.sourceforge.net/

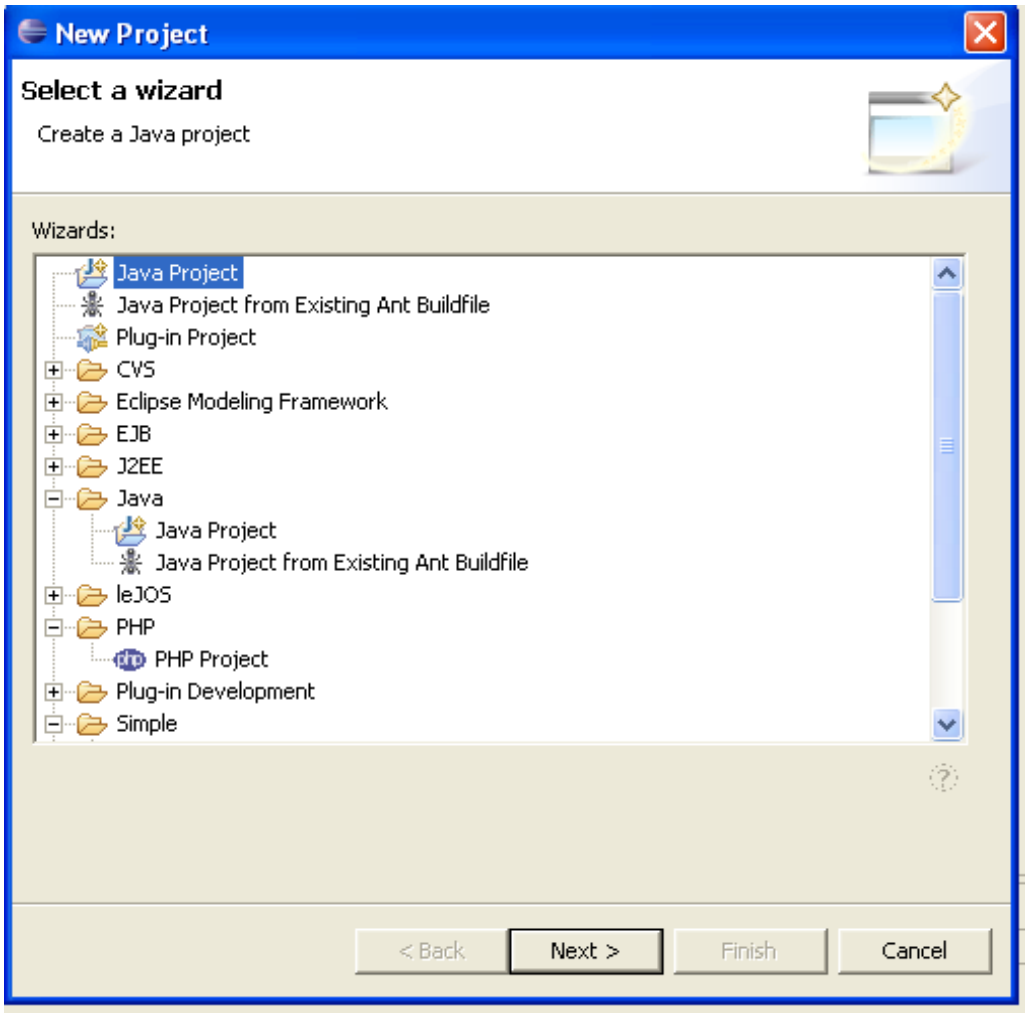
Lejos's Web Site



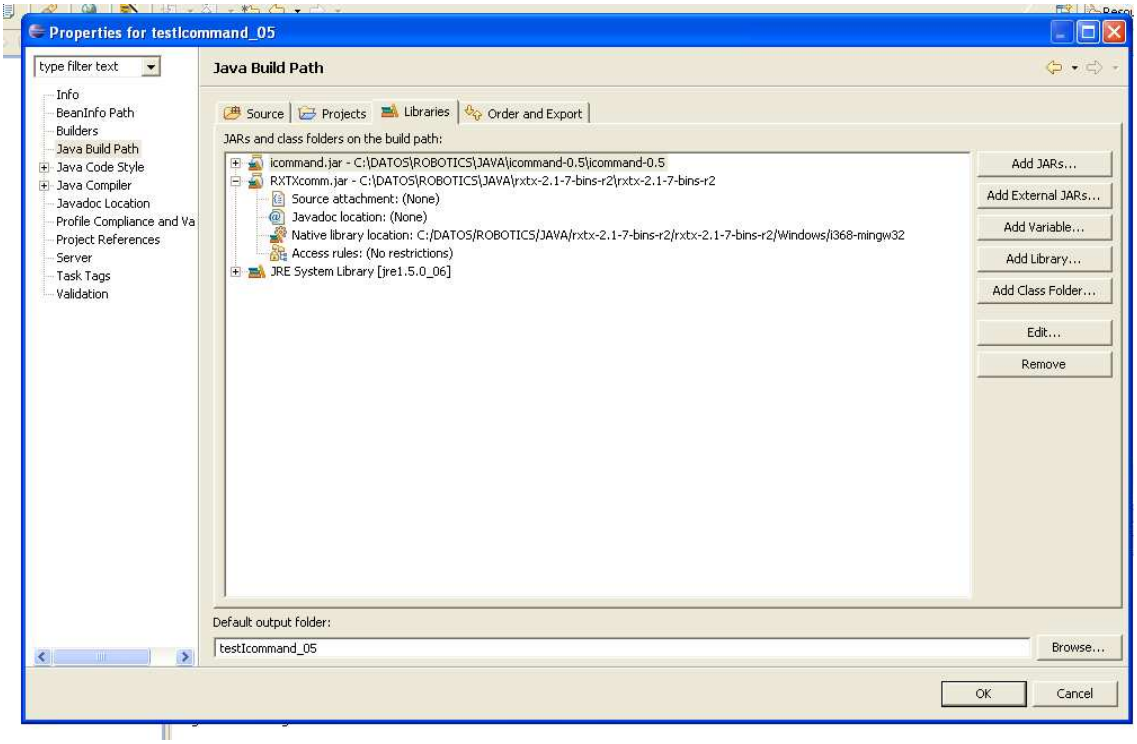
Icommand's Web site

When you download Icommand, unzip it and create a project with Eclipse. You can download Eclipse IDE in http://www.eclipse.org/

When you install it, create a new Java Application in Eclipse:



When you are configurating your new Java Application, you have to add Java libraries, in this case, you should to add Icommand library into your icommnad project:



Once you have added icommand library, you have to install RXTX.

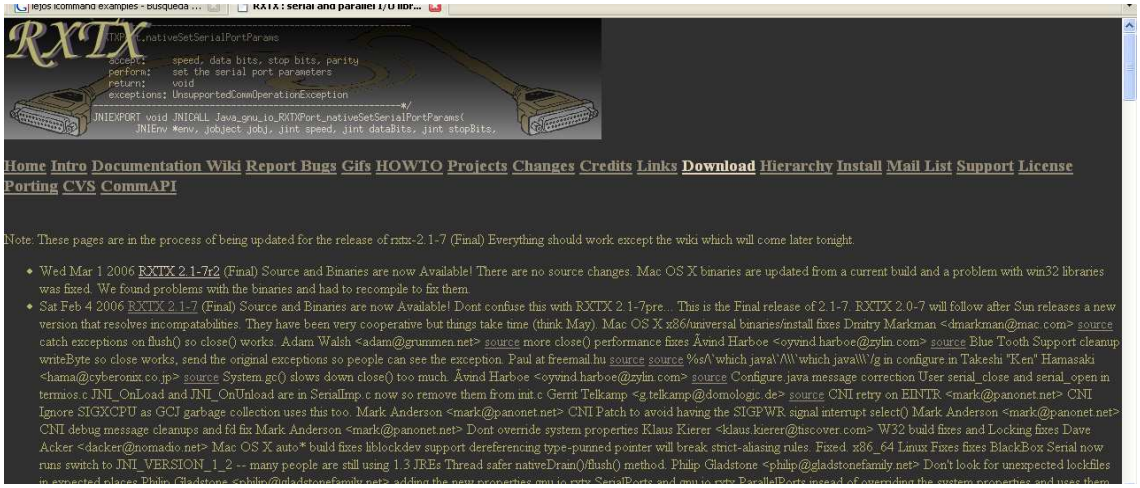
RXTX Install

The steps to install RXTX are:

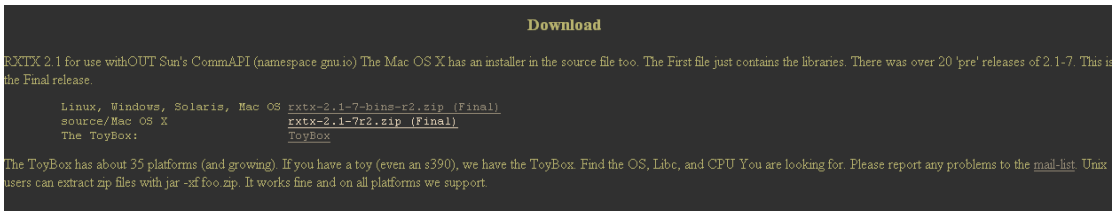
1. Download RXTX from http://www.rxtx.org.
2. Set the Java build path to include RXTXcomm.jar. In Eclipse, after you start a new project, select Project, Properties, Java Build Path and "Add External Jars...", then browse to RXTXcomm.jar.
3. There are some dll's that come with RXTX. Make the dll's accessible by copying them to your Java bin directory e.g. c:\j2sdk1.4.2_12\bin. In Eclipse, select the RXTXcomm.jar you just added and expand it by clicking +. Select "Native library location" and browse to the RXTX subdirectory \Windows\i368-mingw32 (or the directory for your platform).

Comments:

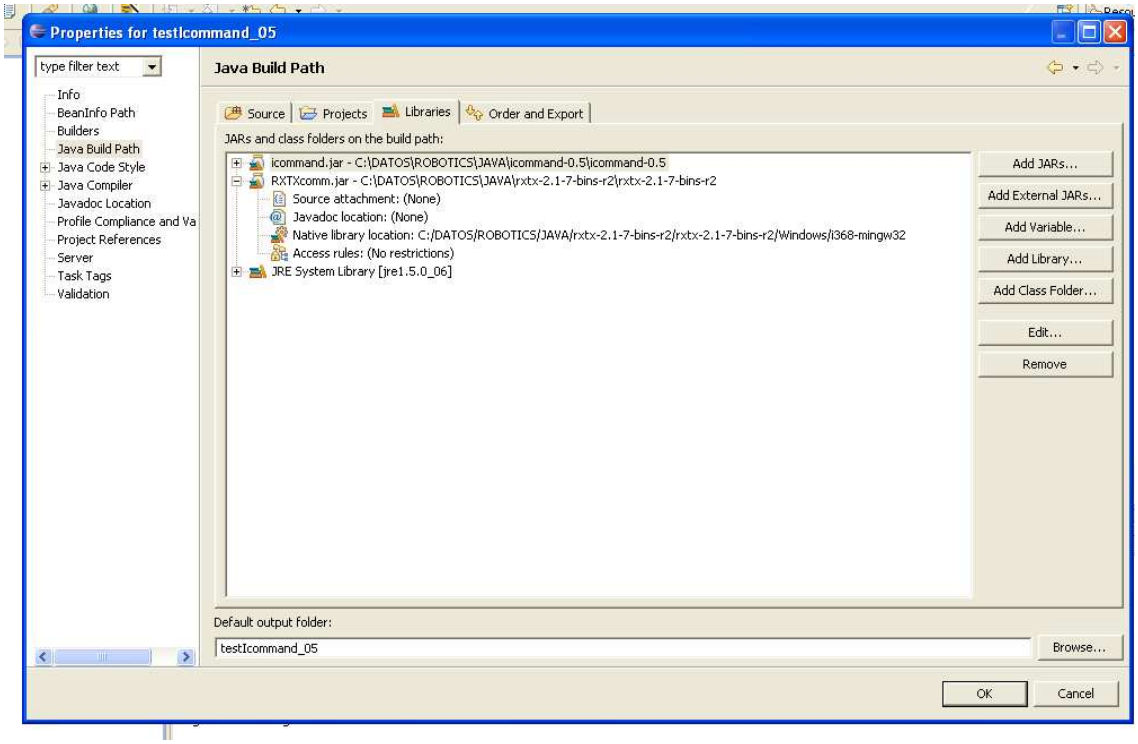
Download RXTXcomm.jar from RXTX web site in http://www.rxtx.org



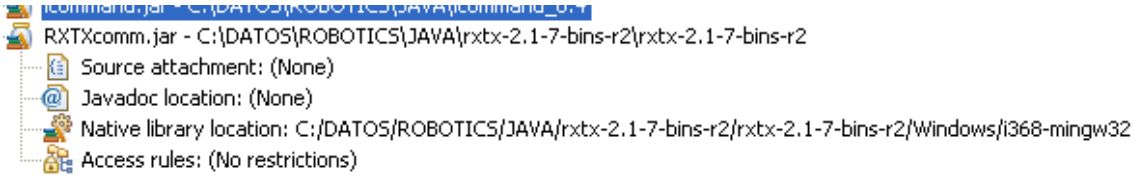
Click in download link and search Window Version:



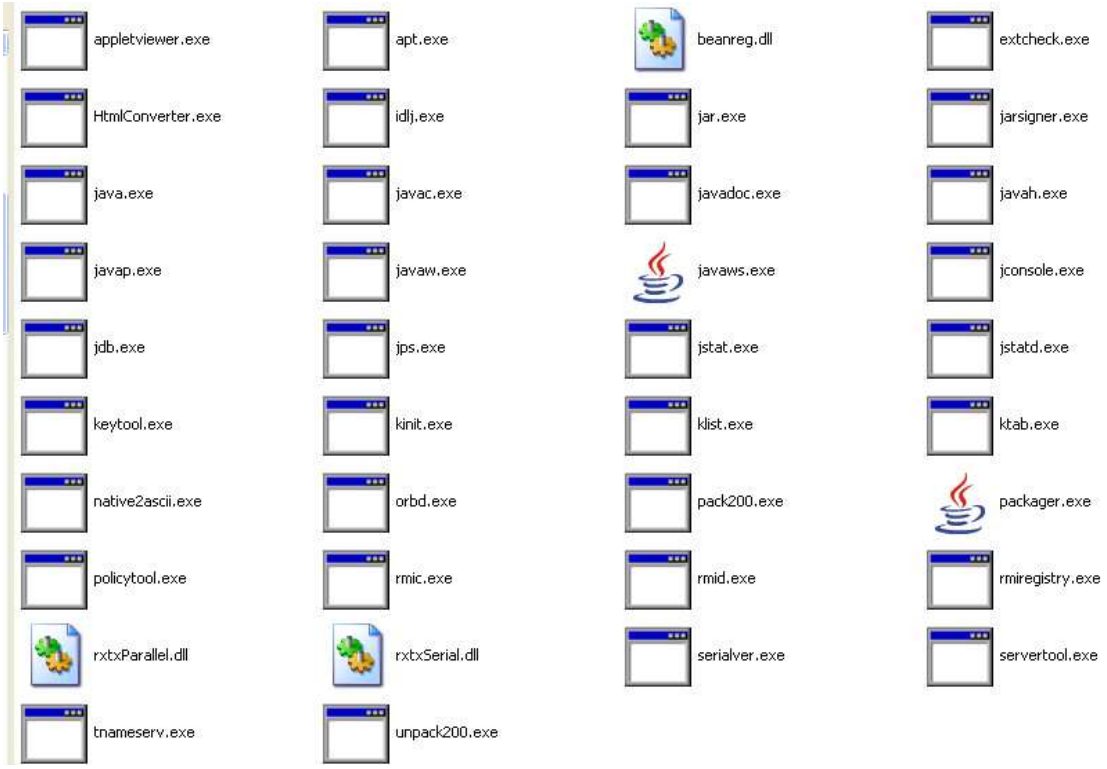
When you have downloaded rxtx-2.1-7r2.zip, unzip it and add the path in the new Java Application that you are configurating in Eclipse.



When you have added RXTXcomm.jar then you have to expand it to add Native library location path, Windows\i368-mingw32.
On this folder, there are 2 files:



Besides you have to copy and paste that files into the folder of you Java JDK. In my installation I installed jdk1.5.0_09



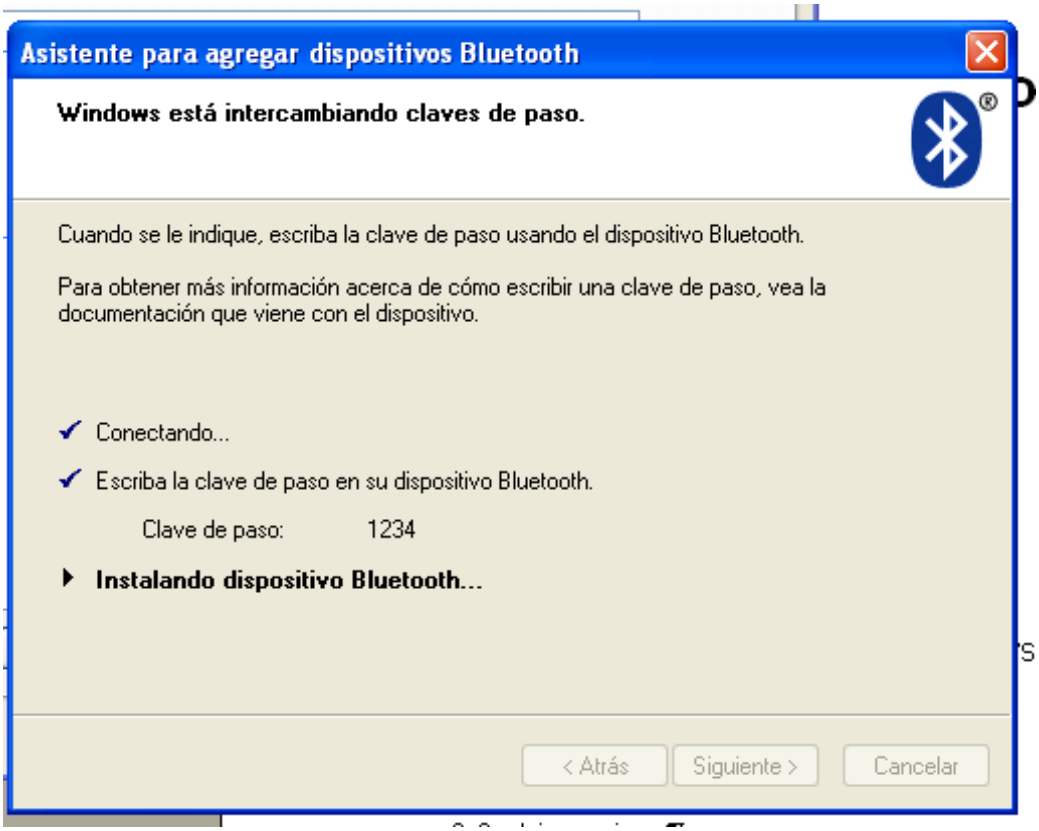
The COM port serial service

When you installed the Lego software, it set up a COM port already. You just need to figure out how to find the COM port.

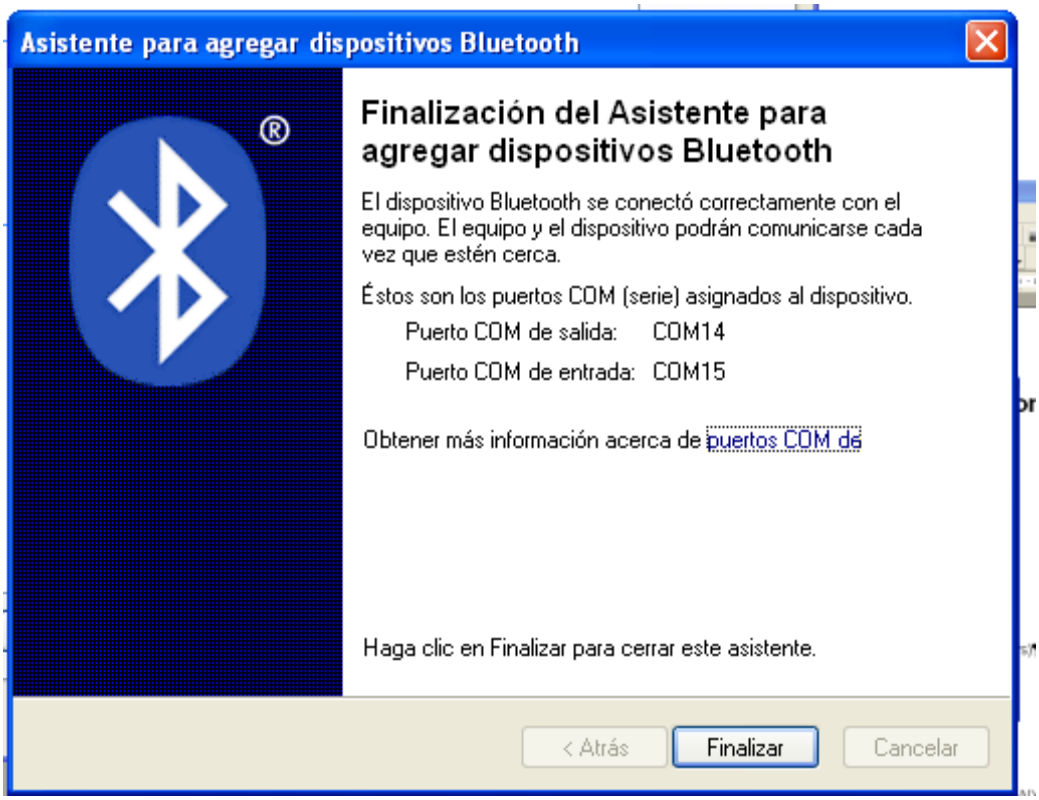
1. Go to Control Panel, System. Click the Hardware tab and select Device Manager.
2. You can now expand 'Ports(COM & LPT)' tree to see the COM ports.
3. The one you want is the lowest Bluetooth COM port in the list e.g. COM4
4. In the file icommand.properties set the value of nxtcomm to the value of your COM port e.g. COM4.
5. Put the file icommand.properties into your home directory, or your working directory.
6. To check the location and contents of the file, execute the command: java -jar icommand.jar

Comments:
When you turn on your NXT brick and if you have installed in your PC or your laptop a Bluetooth dongle then the system will recognize your NXT brick as a bluetooth device but you have to configurate it.

Put a key, in your wizard window to add. I recommend the key 1234 because in NXT brick, this key is edited as a default key.

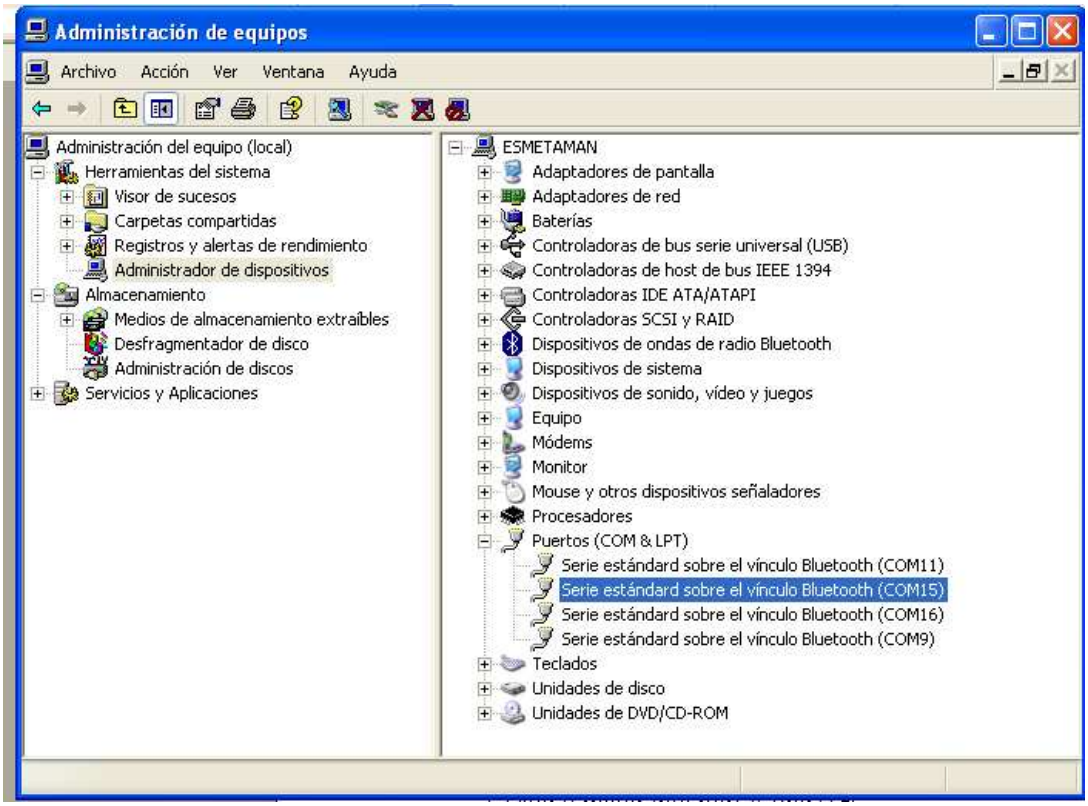


When you have connected NXT brick with your laptop, Windows O.S. tell you the COM ports used by NXT brick. In next step you will use lowest COM port.

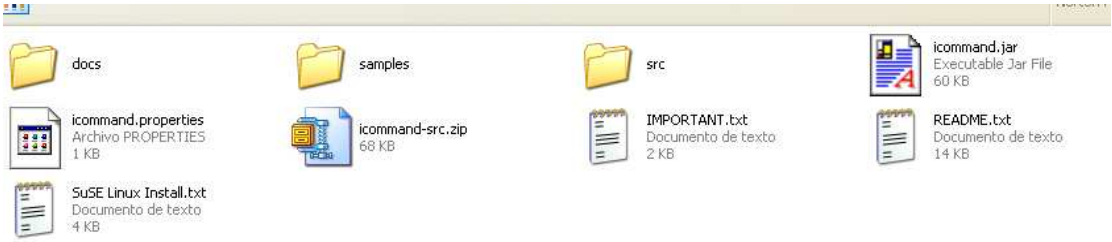


If you have doubts about COM ports used by your NXT brick, use Admin Machine Window. Another way to access to this window is the following:

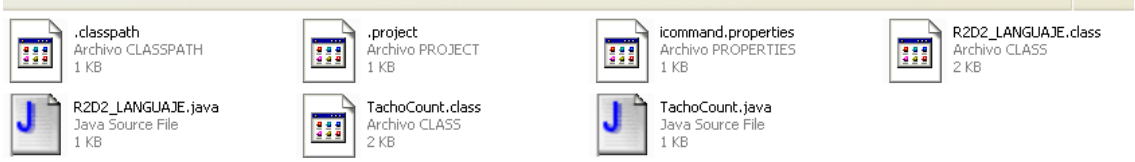
If you expand Device Manager, and you click in COM & LPD ports you will see COM ports used by your NXT brick



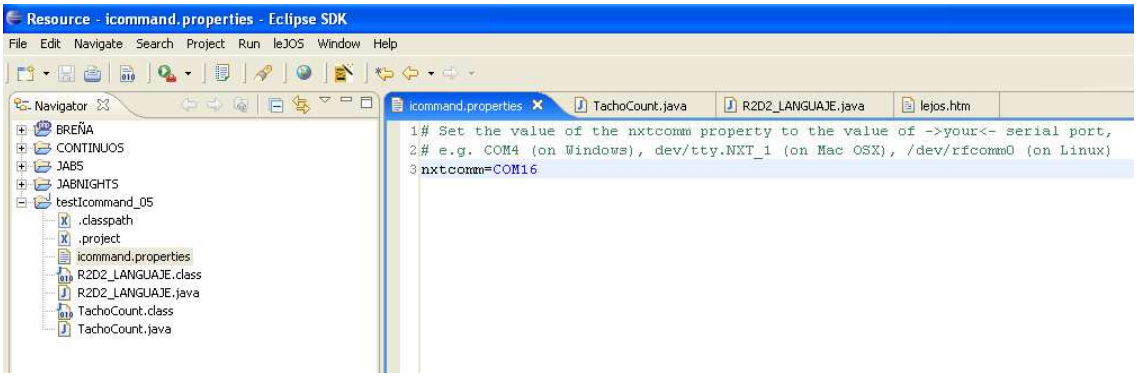
When you know the right port, the lowest COM port used by your NXT brick, you have to edit a file that you can find on icommand 0.5 folder:



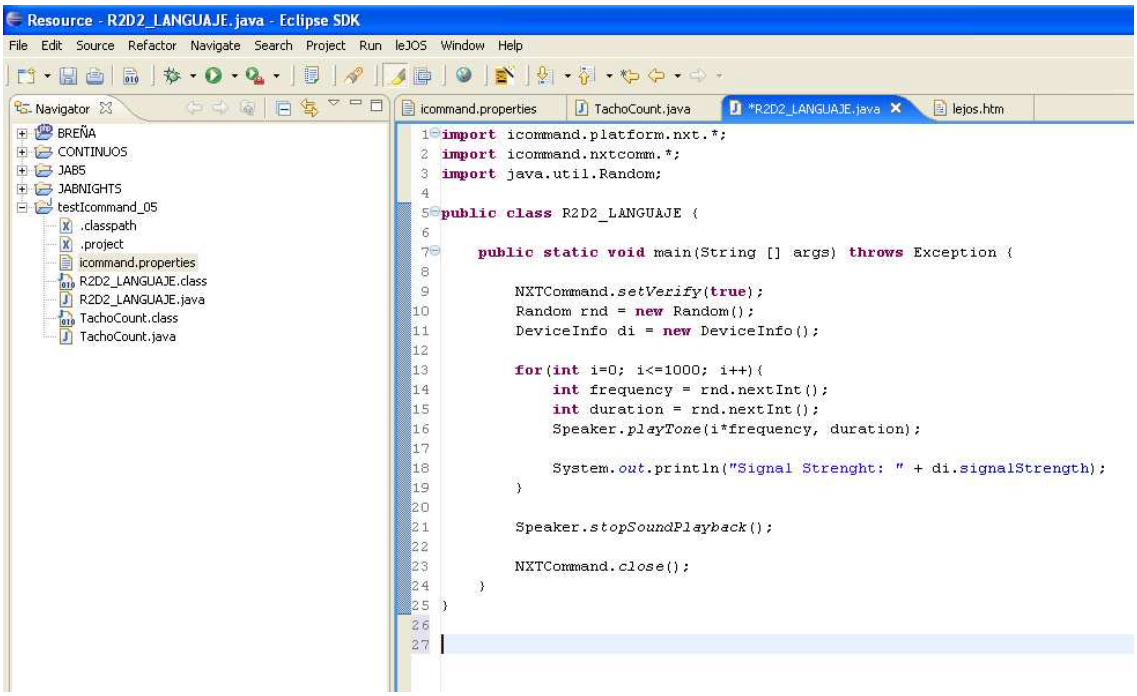
the file is named: icommand.properties. this file is used to set the COMport used by your NXT brick. Copy and paste into your icommand project:



When this file is in that folder, you can update the browser view in Eclipse with F5 and edit that file:



When you have done all steps, you can compile and run your icommand programs.



Thanks for Lejos Team. :D

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http://www.juanantonio.info/p_research/robotics/robotics.htm